



ETA-USA

The Power Professionals

AOJS240

240W AC/DC



AOJS-240



Features

- User selectable input voltage
- Over voltage protection
- Overcurrent protection
- Inrush Current Limit
- **4 Yr warranty**

	MODEL/CHANNEL	Unit	AOJS240-3.3	AOJS240-5	AOJS240-9	AOJS240-12	AOJS240-15	AOJS240-24	AOJS240-48	
OUTPUT	Nominal Voltage	V	3.3	5	9	12	15	24	48	
	Current	A	48	48	26.7	20	16	10	5	
	Rated Power	W	158	240	240	240	240	240	240	
	Line Regulations	mV	20	20	48	60	60	96	192	
	Load Regulations	mV	40	40	96	120	120	192	384	
	Temperature Drift	mV	50	75	135	180	150	240	480	
	Ripple & Noise(pk-pk) (*1)	mV	120	120	150	150	150	150	250	
	Turn-on Time typ.	ms	800 max (AC IN 100V, Io=100%)						1500(AC IN 100V, Io=100%)	
Hold-up Time typ.	ms	14 (AC IN 110/220V, Io=100%)						15(AC IN 100V, Io=100%)		
INPUT	Voltage Currency	V	AC100-120/200-240(AC88-132/176~264), 50/60Hz(47-440Hz) or DC240-370(User selectable)							
	Current	110V	5.5 (Io=100%)							
	Typical	220V	2 (Io=100%)							
	Efficiency	110V	%	73	78	83	83	83	86	86
	Typ.	220V								
Inrush Current	110V	A	40 (Ta=25°C Cold Start)							
Typical	220V									
Function	Over Voltage Protection	V	Works at 115~140% of rating, recover automatically							
	Over Current Protection (*2)	A	Works @110% of rating, Protection type: recover automatically							
	Remote Sensing	-	Available							
	Remote ON.OFF	-	Available							
	Cooling/O.T.P	-	Convection cooling							
Electrical Isolation	Input - Output	-	AC 3KV 1min., cut-off: 20mA / DC 500V 100 MΩ							
	Input - F.G	-	AC 2KV 1min., cut-off: 20mA / DC 500V 100 MΩ							
	Output - F.G	-	AC 0.5 KV 1min., cut-off: 100mA / DC 500V 100 MΩ							
Environment	Operating temp. & Hum.	-	-25~70°C with derating 20~90% RH (non-condensing)							
	Storage temp. & Humidity	-	-40~85°C, 20~90% RH (non-condensing)							
	Vibration	-	10~55Hz @ 1G 3 minutes PERIOD, 30 minutes along X,Y & Z axis							
Dimension	Size(LxWxH)/Weight	mm/g	201Lx98Wx38H/700							
	Safety	-	Approved							
	Emission	-	Compiles with EN55022-B, FCC-B, EN55011							



ETA-USA

16170 Vineyard Blvd. Suite 180 Morgan Hill, CA 95037 <http://www.eta-usa.com>
Toll-free (US only): 800-ETA-POWR (800-382-7697) Telephone: 408 778-2793 FAX: 408-779-2753



240W Power Supply

The diagram illustrates the functional blocks of a power supply system. The input consists of two AC lines (AC(L)) and a ground (FG). The AC lines pass through a Line Filter, then an Inrush Current Limit stage which is controlled by a 115V/230V SELECT SWITCH. The output of the Inrush Current Limit stage goes to a Rectifier Circuit. The output of this Rectifier Circuit is connected to a transformer. The secondary of the transformer is connected to another Rectifier Circuit, which provides the +V and -V output rails. The output of the first Rectifier Circuit also feeds into a Control Circuit (PWM) and an Over Current Detect block. The Control Circuit (PWM) is connected to a MOSFET, which in turn drives two diodes (represented by triangles and circles) that feed into an Error Amp and an Over Voltage Detect block. The Error Amp and Over Voltage Detect blocks are connected to the +V and -V output rails. The Over Current Detect block is connected to the output of the first Rectifier Circuit and the MOSFET gate. The MOSFET gate is also connected to ground.

Mark Pin	Connection Function	FUNCTION
L	AC Live line	SMPS AC input Terminal (Fuse in Line)
N	AC Neutral line	SMPS AC input Terminal
F.G	Frame ground	SMPS AC Grounding
+V	DC Output (+)	DC Output (+) Terminal
-V	DC Output (-)	DC Output (-) Terminal

o Over voltage protection feature is to be off, once the system is restored after the problem for malfunction is resolved, followed by cutting off AC input power for 3 minutes. If output voltage is NOT restored to normal, however, it is highly recommended to consult with personnel at customer support to monitor possible internal damage to the product.





AOJS-240

240W Power Supply

4. Series operation / Parallel operation

4-1. Both connection systems as shown at Figure 1 or Figure 2 can be used during series operation.

4-2. In parallel operation A at Figure 4, current capacity cannot be increased, while it should be used for backup only. Moreover, diode that is to be added during parallel operation should be selected after considering its voltage drop (V_f), output voltage (V_o) and current capacity (I_o).

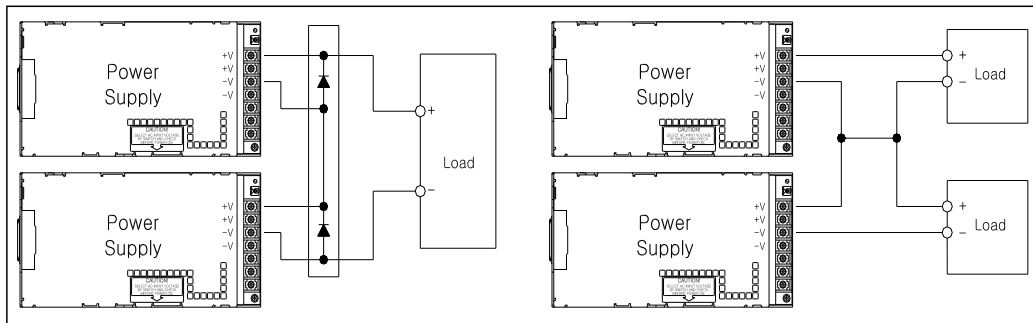


Fig 1. Series operation A

Fig 2. Series operation B

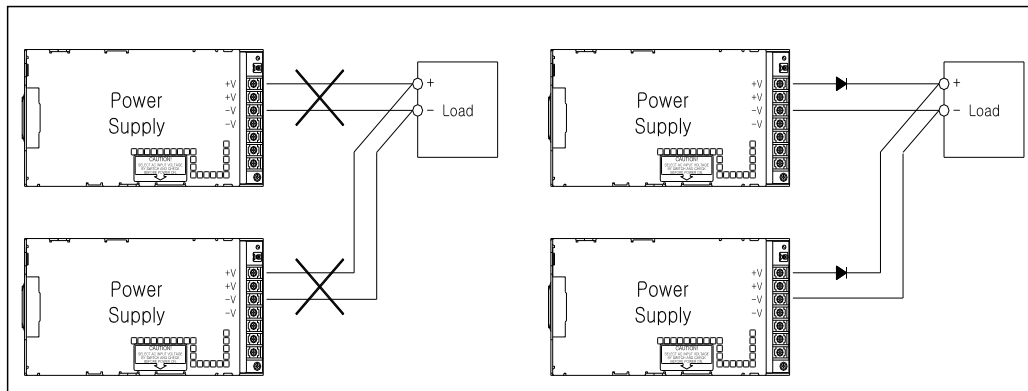


Fig 3. Parallel operation A (X)

Fig 4. Parallel operation B (Back up)

5. Mounting method

5-1. It should be mounted as follow in the consideration of air cooling

- o Mounting method should be considered with airflow
- o Leave enough spaces between units when several units mounted together
- o Forced air cooling makes protection against heat better





AOJS-240

240W Power Supply

5. Mounting method

5-1. It should be mounted as follow in the consideration of air cooling

- o Mounting method should be considered with airflow
- o Leave enough spaces between units when several units mounted together
- o Forced air cooling makes protection against heat better
- o Life span of The air cooling fan for AOJS240 is approximately 50,000 Hrs at 25°C

(Notice) the expected life span would be shorter when ambient temperature is over 25°C

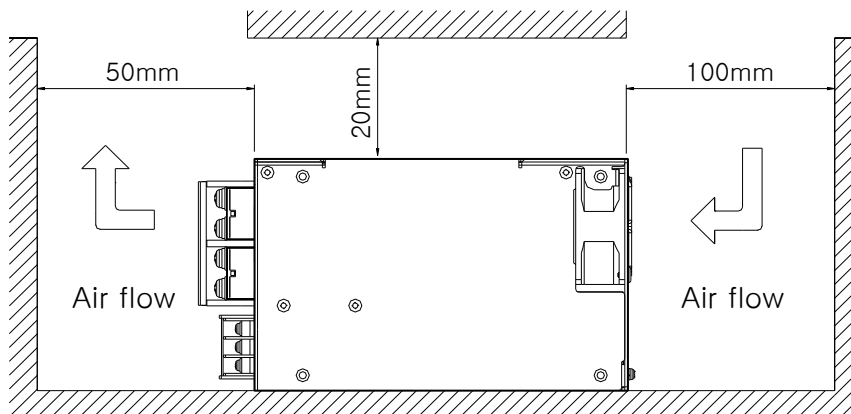
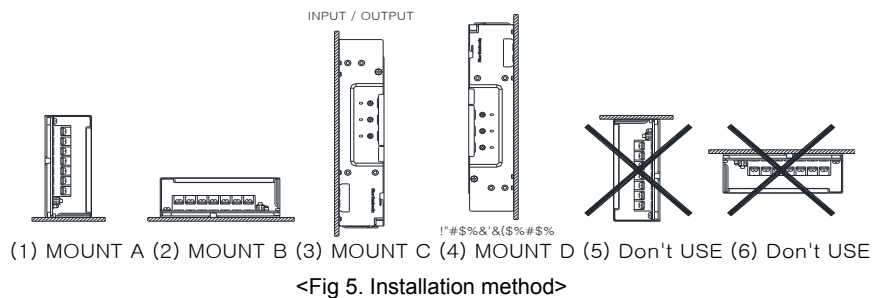


Fig 6.





AOJS-240

240W Power Supply

5. Mounting method

5-1. It should be mounted as follow in the consideration of air cooling

- o Mounting method should be considered with airflow
- o Leave enough spaces between units when several units mounted together
- o Forced air cooling makes protection against heat better
- o Life span of The air cooling fan for AOJS240 is approximately 50,000 Hrs at 25°C

o Please refer to below Graph when Output derating curve is applied at AC95V input voltage.

